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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,608	08/29/2000	Christopher S. Campbell	ARC9-2000-0027-US1	8706

26381            7590            05/05/2003  
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ALEXANDRIA, VA 22314

[REDACTED] EXAMINER

NGUYEN, CHANH DUY

[REDACTED] ART UNIT      [REDACTED] PAPER NUMBER

2675

DATE MAILED: 05/05/2003

*[Signature]*

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/649,608	CAMPBELL ET AL.
	Examiner Chanh Nguyen	Art Unit 2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 February 2003.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 26 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_ .
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ .                                   |

**DETAILED ACTION**

***Response Amendment***

1. The amendment filed on February 7, 2003 has been entered and considered by examiner.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tognazzini et al (U.S. Patent No. 5,886,6830) in view of Jones (G.B. 2,170,910).

As to claim 1, Tognazzini discloses a method of recognizing reading skimming and scanning modes from eye gazed patterns (see column 4,lines 50-54 and column 17, lines 1-5). Tognazzini teaches the step of quantizing ( or average) eye movements of a user viewing heterogeneous content in both X and Y coordinates (two dimensional coordinates); see column 9, lines 55-65 and column 10, lines 40-44. The only thing different from the claim 1 and Tognazzini is that the Tognazzini does not mention the limitation "accumulating a numerical evidence of reading until a predetermined threshold is reached; and detecting reading when the numerical evidence of reading exceeds the threshold". Jones teaches that "it also feeds a differentiator 23 which continuously measures the rate of change of the output signal, and comparator 25 which compares the signal rate of change with the threshold value for eye movement of  $2^0/\text{Sec}$ "; see page 2, lines 61-63. This reads on the limitation "accumulating a numerical evidence of reading until a predetermined threshold is reached". Jones also teaches that "when the rate increase through this threshold a signal is provided on output 26 to enable the microcomputer to sample the signal value on output 27" (see page 2,lines 64-65 and page 4,liens 7-9. This reads on the limitation " detecting reading when the numerical evidence of reading exceeds the threshold". Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the step accumulating and detecting a numerical evidence of reading as taught by Jones to the gaze tracking device of Tognazzini so that an operator can select the object displayed on the screen accurately.

As to claim 12, this claim differs from claim 1 only in that claim 1 is method claim whereas claim 12 is apparatus. Thus, apparatus claim 12 are analyzed as previously discussed with respect to claim 1 above.

As to claim 23, this claim differs from claim 12 only in that the term means is recited. Thus, the claim is analyzed similar to claims 1 and 12 above.

As to claims 24 and 25, these claims differ from claim 12 and 23 in that the term "computer program instructions" is used in the claims. Tognazzini clearly teaches computer program products.

As to claim 2, Tognazzini clearly teaches quantizing step including averaging over a predetermined period of time; see column 10, lines 39-43.

As to claim 3, Tognazzini clearly teaches GUI which reads on icons or menus as recited in the claim; see column 2, lines 1-11.

As to claims 4-5, Tognazzini teaches that "the interest is determined by measuring the user reading speed, determining whether the user only skimmed the information or read the information in depth and by measuring the amount of time spent with each article.."; see column 17, lines 1-5. This reads on the claimed switching modes from a skimming mode to a reading mode when the reading is detected.

As to claims 6 and 10-11, Tognazzini teaches the use of search engine (column 16, lines 41-43) and large data information located in WWW browser (see column 11, lines 25-50). This reads on the claimed data base as recited in the claim.

As to claims 7 and 9, the claimed steps of developing accurate models of the users reads on the step of average gaze coordinates to find the position of gaze as

taught by Tognazzini since it would provide accurate position of gaze to select an item or object displayed on the screen.

As to claim 8, Tognazzini clearly teaches the step of determining fine grained information regarding the user interest in Internet advertising; see column 16,lines 50-60.

As to dependent claims 13-22, these dependent apparatus claims are analyzed as previously discussed with respect to the dependent method claims 1-11.

***Response to Arguments***

5. Applicant's arguments filed February 7, 2003 have been fully considered but they are not persuasive.

On page 6, lines 1-13, applicant argues that "the claimed invention provides for reading evidence variable that can be incremented by 1 when the eye moves to the right and decremented by -1 when the eye moves toward to the left" while in Tognazzini's device a region of interest is detected (not actual reading based upon the amount of time spent gazing at that particular region in a computer screen. However, the claims do not recite the limitation incremented by 1 when the eye moves to the right and decremented by -1 when the eye moves toward to the left as applicant's argument..

On page 6, last paragraph, applicant argues that "Jones suggests that signal rate of change is compared against a threshold value of eye movement measured in degrees/sec and not against a numerical threshold value of reading as required by claim 1". However, when the eyes move from one place to another place, the information displayed on the screen is read by the human' eyes. For example, the

operator's eyes move from left to right of the first line information display on the screen, the operator would read the information from left to right of that line, even that reading is quick reading without stare. Thus the numerical value  $2^0$ /Sec is interpreted as a value of reading without stare (see page 4, lines 8-10). The claimed "numerical evidence reading" and threshold" are so broad that they can even read on the stare time as taught by Tognazzini and Jones. For example, if the stare time is greater than 1 second, the information is read by a user in depth. The 1 second is interpreted as a predetermined threshold, and the numerical less than 1 second (e.g., 0.1- 09 second) is a numerical evidence of reading.

As to claim 2, applicant presents the same arguments presented in claim 1. Thus it analyzed as previously discussed with respect o claim 1 above.

As to claim 6 and 10-11, applicant argues that the present invention's method detect reading (as opposed to gazing or staring) via threshold. However, applicant does not define gazing or staring different from reading recited in the claim. The term reading is broad enough to read on gazing. Gazing information is simply interpreted as reading in depth.

As to claims 7 and 8, applicant presents the same argument as presented in claim 1 (i.e. threshold). This argument is analyzed as previously discussed with respect to claim 1 above.

As to claim 9, the claimed "providing more accurate help regarding computer applications" is so broad that it can read on the GUI as taught by Tognazzini. GUI can

help the operator to identify the application. It is not necessary a help text described on page 12 of the specification as applicant's argument.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Steven Saras can be reached at 305-9720.

**Any response to this action should be mailed to:**

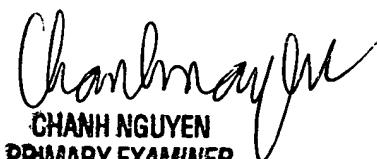
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)  
Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Technology Center 2600 Customer Service Office  
whose telephone number is (703) 306-0377.

CMN  
C. Nguyen  
November 1, 2002

  
CHANH NGUYEN  
PRIMARY EXAMINER